

B.Sc. Chemistry Hons. Practical Examination-2021

Gurudas College Centre

SEM-VI

Paper: DSE A-3

Full Marks-30

Answer any six of the following questions:

6×5=30

1. Write down the Diels-Alder reaction between furan and maleic anhydride in aqueous medium. Calculate the amount of furan, maleic anhydride and the product in gm if 15 mmol furan reacts with 15 mmol maleic anhydride and gives 80% yield. 2+3
2. What is biodiesel? Write down the procedure and reaction of preparation of biodiesel from vegetable oil. 2+3
3. Is there any effect on photoreduction of benzophenone if UV lamp is used instead of sunlight? Write down the reaction with plausible mechanism when alcoholic solution of benzophenone is kept in natural sunlight in presence of acid catalyst. 2+3
4. What happens when benzopinacol is treated with iodine in glacial acetic acid? Write down the procedure of the reaction with plausible mechanism. 2+3
5. Why is benzil benzilic acid rearrangement a green reaction? What is the amount of the product in gm if 1.0 g benzil gives 80% yield of the product? 2+3
6. Write down the name and structure of the catalyst used for the green synthesis of benzoin from benzaldehyde. Show the plausible mechanism of the reaction. 2+3
7. Which materials are required for the preparation of nanoparticles of gold using tea leaves? Write down the procedure. 2+3
8. Where does d-limonene occur? How is it collected in laboratory? 2+3
9. Write down the reaction between sodium bromide and sodium bromate in presence of acetic acid. Show the role of base catalyst with mechanism in the preparation of biodiesel from vegetable oil. 2+3
10. What happens when trans-stilbene is treated with sodium bromide and sodium bromate in presence of glacial acetic acid? Calculate the percentage of yield if 2.0 g trans-stilbene gives 2.8 g product. 2+3